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2       What is claimed is:

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4       1. A method of mapping status messages of monitored objects to serv-  
5       ice elements in an IT-infrastructure-management system, the service elements  
6       and their dependencies being represented by an element graph having di-  
7       rected links between service elements, thereby defining higher-level and  
8       lower-level service elements, the method comprising:

9             directing a status message to at least one higher-level service element;  
10          ascertaining, at the higher-level service element, whether the status  
11       message pertains to a lower-level service element connected with the higher-  
12       level service element;

13          downwardly propagating of the status message to said lower-level serv-  
14       ice element in response to a positive outcome in said ascertaining.

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16       2. The method of claim 1, wherein, before the status message is di-  
17       rected to the at least one higher-level service element, the status message is  
18       analyzed, and attributes are added to the status message related to informa-  
19       tion contained in the status message, wherein said ascertaining is performed  
20       on the basis of the attributes associated with the status message.

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22       3. The method of claim 1, wherein at least some of the service elements  
23       are logical service elements.

24  
25       4. The method of claim 1, wherein an edge condition is associated with  
26       a link connecting the at least one higher-level service element with a lower-  
27       level service element, and wherein the edge condition is tested in said ascer-  
28       taining.

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30       5. The method of claim 1, wherein a node condition is associated with  
31       the at least one higher-level service element, and wherein the node condition  
32       is tested in said ascertaining.

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2       6. The method of claim 1, wherein lower-level service elements are ar-  
3 ranged in more than one hierarchical level, and wherein the actions of ascer-  
4 taining and downwardly propagating are repeatedly carried out downwardly  
5 from level to level.

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7       7. The method of claim 6, wherein, in said ascertaining, for a service  
8 element on a higher hierarchical-level, at least one condition is tested for each  
9 service element on a lower hierarchical-level connected with the service ele-  
10 ment on the higher hierarchical-level, and wherein the downward propagation  
11 of the status message is terminated if no condition for propagating the status  
12 message to a service element on the lower hierarchical-level is fulfilled.

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14       8. The method of claim 1, wherein the element graph is able to be ex-  
15 tended by adding further service elements without a necessity to adapt the  
16 status messages of the monitored objects to the service elements added.

17

18       9. A method of mapping status messages of monitored objects to serv-  
19 ice elements in an IT-infrastructure-management system, the service elements  
20 and their dependencies being represented by an element graph having di-  
21 rected links between service elements, thereby defining higher-level and  
22 lower-level service elements, the method comprising:

23           analyzing a status message of a monitored object, and adding attributes  
24 to the status message related to information contained in the status message;

25           directing the status message to at least one higher-level service element;

26           ascertaining, at the higher-level service element, on the basis of at least  
27 one of the attributes, whether the status message pertains to a lower-level  
28 service element connected with the higher-level service element;

29           downwardly propagating of the status message to said lower-level serv-  
30 ice element in response to a positive outcome in said ascertaining.

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32       10. The method of claim 9, wherein at least some of the service ele-

1 ments are logical service elements.

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3       11. The method of claim 9, wherein an edge condition is associated with  
4 a link connecting the at least one higher-level service element with a lower-  
5 level service element, and wherein, in said ascertaining, it is tested, using at  
6 least one of the attributes, whether the edge condition is fulfilled.

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8       12. The method of claim 9, wherein a node condition is associated with  
9 the at least one higher-level service element, and wherein, in said ascertain-  
10 ing, it is tested, using at least one of the attributes, whether the node condi-  
11 tion is fulfilled.

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13       13. The method of claim 9, wherein lower-level service elements are ar-  
14 ranged in more than one hierarchical level, and wherein the actions of ascer-  
15 taining and downwardly propagating are repeatedly carried out downwardly  
16 from level to level.

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18       14. The method of claim 13, wherein, in said ascertaining, for a service  
19 element on a higher hierarchical-level, at least one condition is tested for each  
20 service element on a lower hierarchical-level connected with the service ele-  
21 ment on the higher hierarchical-level, and wherein the downward propagation  
22 of the status message is terminated if no condition for propagating the status  
23 message to a service element on the lower hierarchical-level is fulfilled.

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25       15. The method of claim 9, wherein the element graph is able to be ex-  
26 tended by adding further service elements without a necessity to adapt the  
27 status messages of the monitored objects to the service elements added.

28

29       16. An IT-infrastructure-management server arranged to map status  
30 messages of monitored objects of the IT infrastructure to service elements  
31 which are represented in the server in an element graph having directed  
32 links connecting service elements, thereby defining higher-level and lower-

1 level service elements, the server being programmed to:  
2       direct a status message to at least one higher-level service element;  
3       ascertain, at the higher-level service element, whether the status mes-  
4 sage pertains to a lower-level service element connected with the higher-level  
5 service element;  
6       propagate downwardly the status message to said lower-level service  
7 element in response to a positive outcome in said ascertaining.

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9       17. An IT-infrastructure-management server arranged to map status  
10 messages of monitored objects of the IT infrastructure to service elements  
11       which are represented in the server in an element graph having directed  
12 links connecting service elements, thereby defining higher-level and lower-  
13 level service elements, the server being programmed to:

14       analyze a status message of a monitored object, and add attributes to  
15 the status message related to information contained in the status message,  
16       direct the status message to at least one higher-level service element;  
17       ascertain, at the higher-level service element, on the basis of at least  
18 one of the attributes, whether the status message pertains to a lower-level  
19 service element connected with the higher-level service element;  
20       propagate downwardly the status message to said lower-level service  
21 element in response to a positive outcome in said ascertaining.

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23       18. A computer program product comprising a machine-readable me-  
24 dium with program code stored on it, for carrying out a method, when exe-  
25 cuted on a computer system, of mapping status messages of monitored ob-  
26 jects to service elements in an IT-infrastructure-management system, the  
27 service elements and their dependencies being represented by an element  
28 graph having directed links between service elements, thereby defining  
29 higher-level and lower-level service elements, the program code being ar-  
30 ranged to:

31       direct a status message to at least one higher-level service element;  
32       ascertain, at the higher-level service element, whether the status mes-

1 sage pertains to a lower-level service element connected with the higher-level  
2 service element;

3 downwardly propagating the status message to said lower-level service  
4 element in response to a positive outcome in said ascertaining.

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6 19. A computer program product comprising a machine-readable me-  
7 dium with program code stored on it, for carrying out a method, when exe-  
8 cuted on a computer system, of mapping status messages of monitored ob-  
9 jects to service elements in an IT-infrastructure-management system, the  
10 service elements and their dependencies being represented by an element  
11 graph having directed links between service elements, thereby defining  
12 higher-level and lower-level service elements, the program code being ar-  
13 ranged to:

14 analyze a status message of a monitored object, and add attributes to  
15 the status message related to information contained in the status message,

16 direct the status message to at least one higher-level service element;

17 ascertain, at the higher-level service element, on the basis of at least  
18 one of the attributes, whether the status message pertains to a lower-level  
19 service element connected with the higher-level service element;

20 propagate downwardly the status message to said lower-level service  
21 element in response to a positive outcome in said ascertaining.

22

23 20. A propagated signal carried on an electromagnetic waveform com-  
24 prising a representation of program code for carrying out a method, when  
25 executed on a computer system, of mapping status messages of monitored  
26 objects to service elements in an IT-infrastructure-management system, the  
27 service elements and their dependencies being represented by an element  
28 graph having directed links between service elements, thereby defining  
29 higher-level and lower-level service elements, the program code being ar-  
30 ranged to:

31 direct a status message to at least one higher-level service element;

32 ascertain, at the higher-level service element, whether the status mes-

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2 service element;

3 downwardly propagating the status message to said lower-level service  
4 element in response to a positive outcome in said ascertaining.

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6 21. A propagated signal carried on an electromagnetic waveform com-  
7 prising a representation of program code for carrying out a method, when  
8 executed on a computer system, of mapping status messages of monitored  
9 objects to service elements in an IT-infrastructure-management system, the  
10 service elements and their dependencies being represented by an element  
11 graph having directed links between service elements, thereby defining  
12 higher-level and lower-level service elements, the program code being ar-  
13 ranged to:

14 analyze a status message of a monitored object, and add attributes to  
15 the status message related to information contained in the status message,

16 direct the status message to at least one higher-level service element;

17 ascertain, at the higher-level service element, on the basis of at least  
18 one of the attributes, whether the status message pertains to a lower-level  
19 service element connected with the higher-level service element;

20 propagate downwardly the status message to said lower-level service  
21 element in response to a positive outcome in said ascertaining.